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## PATENT SPECIFICATION

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### COMPLETE SPECIFICATION

#### Improvements in or relating to Automatic Reels for Flexible Electric Conductors

I, PIETRO LUIGI DADINA, of 25, Thorne Road, London, S.W.8, an Italian Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to automatic reels for flexible electric conductors, and it has for its object an improved automatic reel for use in connection with a flat iron appliance of the type in which the iron is heated by means of an electric current led to the flat iron by means of a flexible conductor connected to a supply plug on the wall.

The flexible conductor used in connection with such a flat iron is generally a robust construction, in order to resist the wear caused by the continuous rubbing of the conductor with the surface and edges of the table owing to the to-and-fro movement of the iron in use.

According to my invention, I provide an automatic reel for the flexible conductor of an electric flat iron, characterised by a spring controlled reel to which the flexible conductor is secured at or near the middle, the two portions, namely, the flat iron portion and the wall plug portion, of the conductor winding on or unwinding from the reel in opposite directions. The spring controlled reel is adapted to be secured to the table on the edge thereof, and the portion of the flexible conductor next to the iron winds itself on the reel automatically by the action of the spring, so as to gather the slack thereof, whenever the iron is brought near to the reel, and allows it to unwind to the requisite extent, against the action of the spring, whenever the iron is moved away from the reel, the portion of the conductor next to the wall plug simultaneously and likewise uncoiling and coiling, to a lesser extent, on a part of the reel of lesser diameter, the flexible being secured to the reel at or near its middle and the two portions, which constitute one whole piece of flexible, without joint or connection, winding on or unwinding from the reel in opposite directions, thereby avoiding entirely the use of sliding contacts, and

the flexible may be of lighter construction.

Referring to the drawing left herewith, which illustrates as an example a particular construction of an automatic reel for the flexible conductor of a flat iron, according to the invention:

Fig. 1 is a horizontal section of the device through the axis;

Fig. 2 is an end view in part section;

Fig. 3 is a perspective view of the device secured to a table, in operation.

In the figures, 1 is the axle of the reel, the latter, which is loose on the axle, being constituted of two portions, one, 2 of relatively large diameter, on which is adapted to be wound the portion 3 of flexible conductor next to the flat iron 4, and the other, 5 of relatively small diameter, on which is adapted to be wound the portion 6 of flexible conductor next to the wall plug 7. The reel is enclosed in a casing 8 secured to the table 9 by means of a suitable clamp 10, and provided with, on opposite sides, windows 11 and 12 for the portions 3 and 6 of the flexible, respectively.

The flexible conductor is secured to the core of the reel at or near its middle 13 and wound in opposite directions on the reel, as shown, so that when the portion 3 is being wound on the reel 2, the portion 6 unwinds, and reciprocally. A spring of suitable type, e.g. a spiral or helical spring 14 is provided against or within the reel (in the figure it is within the portion 2 of the reel, of relatively large diameter); it is secured at one end to the axle and at the other end to the reel, so that the latter tends to turn round the axle, which is fixed to the casing 8, in such a direction that it tends always to gather the slack of the portion 3 of the flexible conductor.

In operation, when the flat iron approaches the casing 8 the slack flexible conductor 3 winds itself on the portion 2 of the reel, while the portion 6 unwinds and hangs down, and when the flat iron is moved away from the casing 8, the conductor 3 unwinds and revolves the reel, the conductor 6 being thereby wound on the portion 5 of the reel.

Means may be provided for adjusting

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the tension of the spring. The windows 11 and 12 are preferably provided with rounded and smooth edges to facilitate the gathering in and the paying out of the flexible conductor.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. An automatic reel for the flexible conductor of an electric flat iron, characterised by a spring controlled reel to which the flexible conductor is secured at or near the middle, the two portions, namely, the flat iron portion and the wall plug portion, of the conductor winding on or unwinding from the reel in opposite directions.

2. An automatic reel as claimed in Claim 1, further characterised in that the spring is tending to revolve the reel so as to gather the slack of the portion of flexible conductor next to the flat iron.

3. An automatic reel as claimed in Claim 1 or Claim 2, further characterised in that the two portions of the flexible

conductor wind on or unwind from parts of the reel of different diameters.

4. An automatic reel as claimed in Claim 3, further characterised in that the portion of flexible conductor connected to the flat iron winds on, or unwinds from, the part of the reel of larger diameter.

5. An automatic reel as claimed in any one of the preceding claims, further characterised in that it is housed in a casing adapted to be secured on the edge of a table, and provided with windows provided with rounded and smoothed edges to facilitate the regular winding or unwinding of the flexible conductor.

6. The automatic reel for the flexible conductor of an electric flat iron, substantially as described and as shown in the appended drawings.

Dated this 22nd day of July, 1937.

M. E. J. GHEURY DE BRAY,  
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[This Drawing is a reproduction of the Original on a reduced scale.]

